

Greatest Needs Analysis - Ambulance Station

North Dakota Association of Oil & Gas Producing Counties



August 21st, 2013



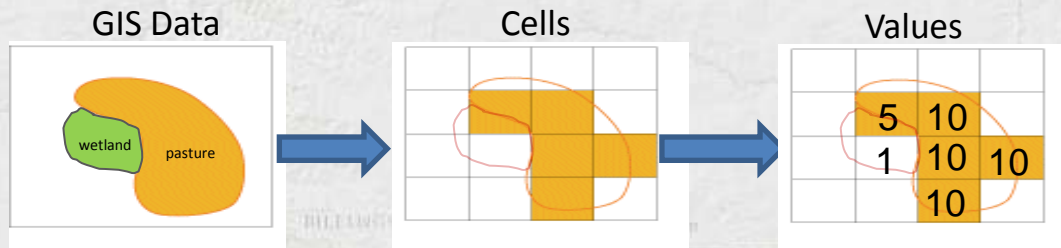
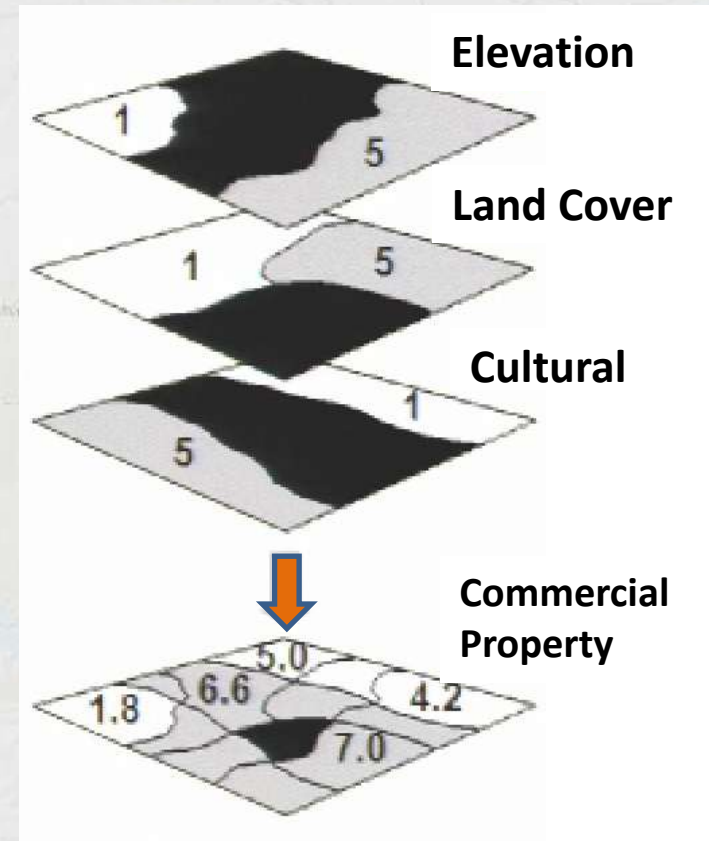
Mike Schnetzer, *Senior GIS Analyst*

Mike Zimney, *Lead GIS Analyst*

Suitability Analysis

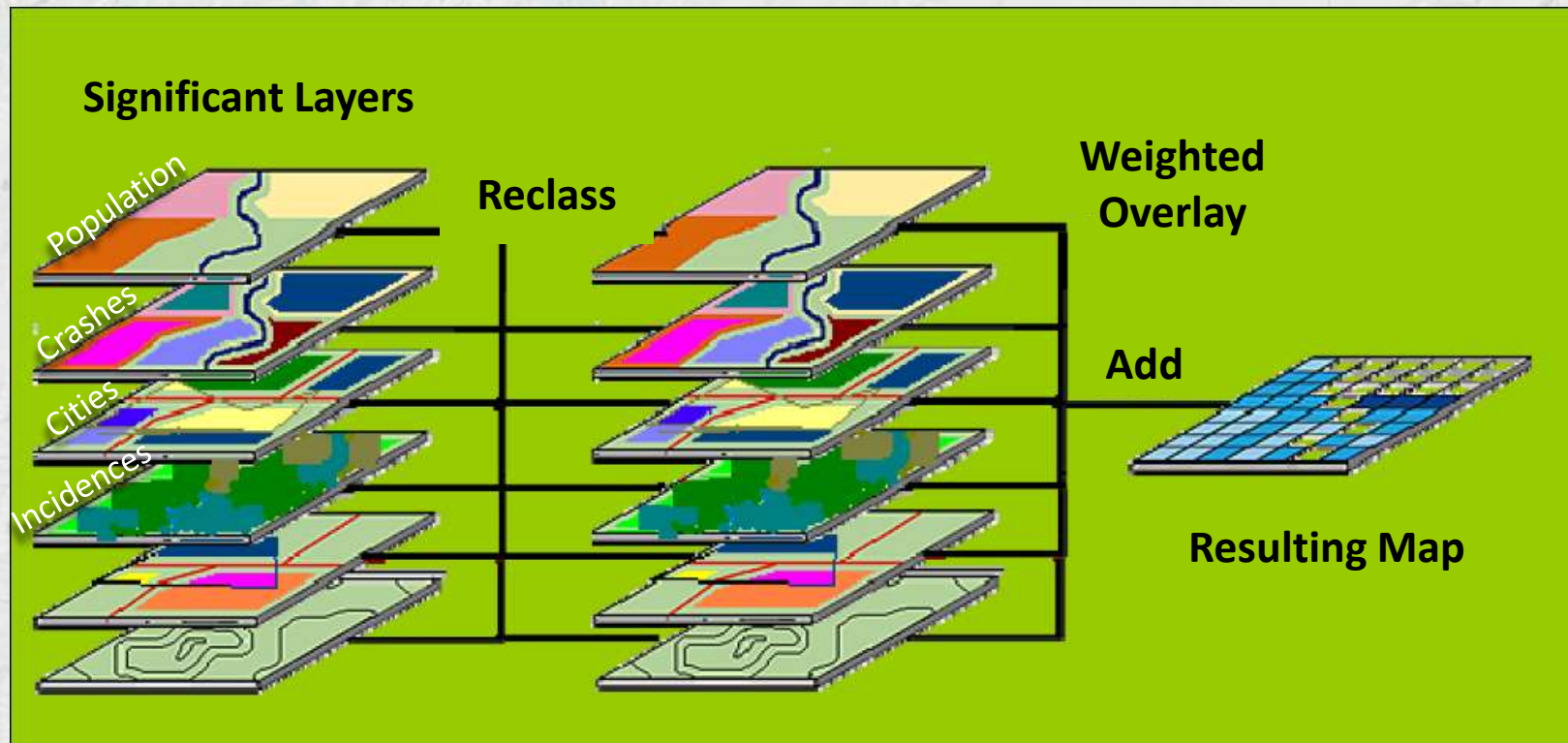
Cell-Based GIS Modeling

1. Identify & map **significant factors** of influence
2. **Reclassify** the value of each factor
3. **Weight** the importance of each layer
4. **Add** the layers together
5. **Analyze** the results

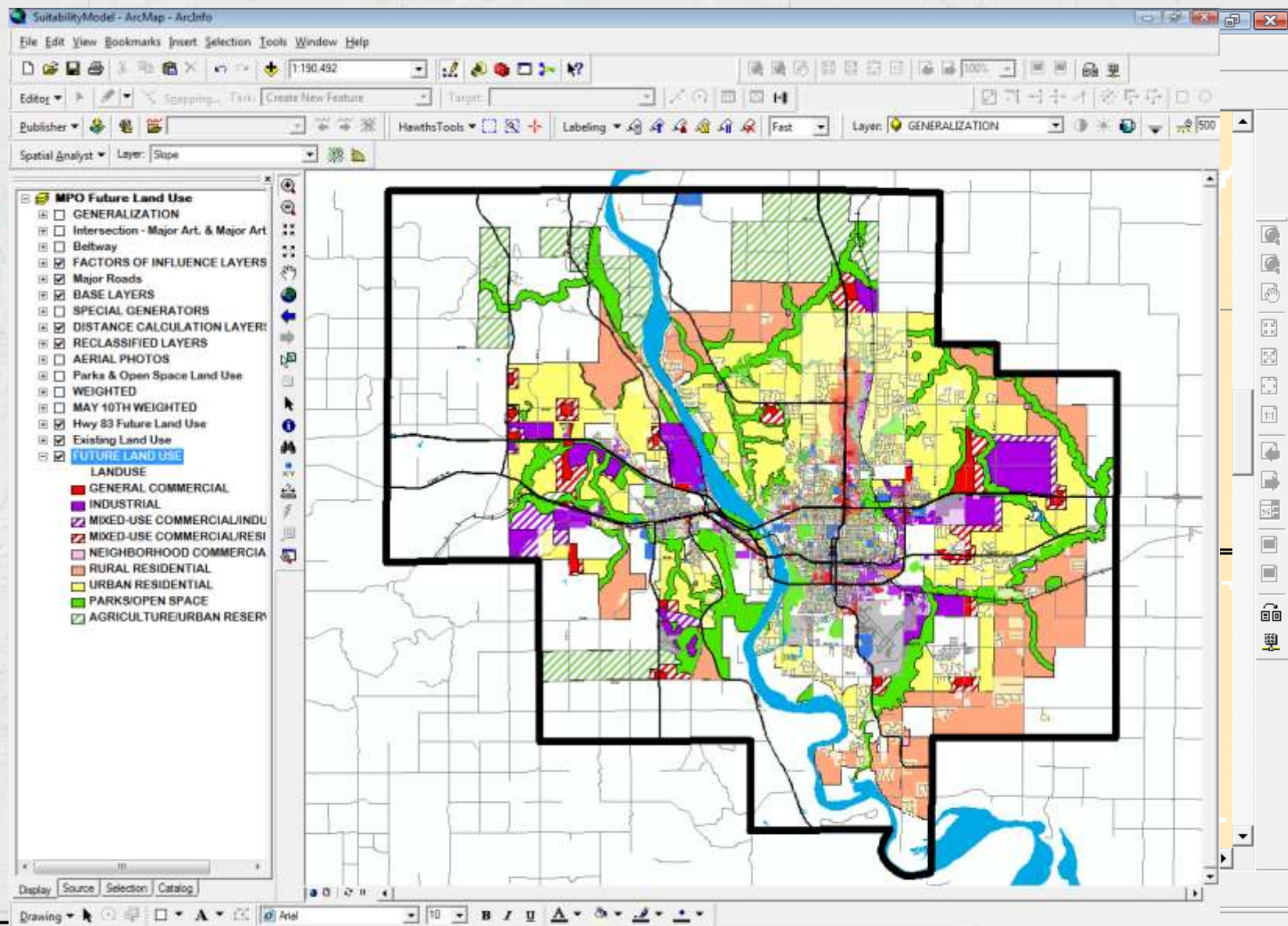


Suitability Analysis

Cell-based GIS Modeling



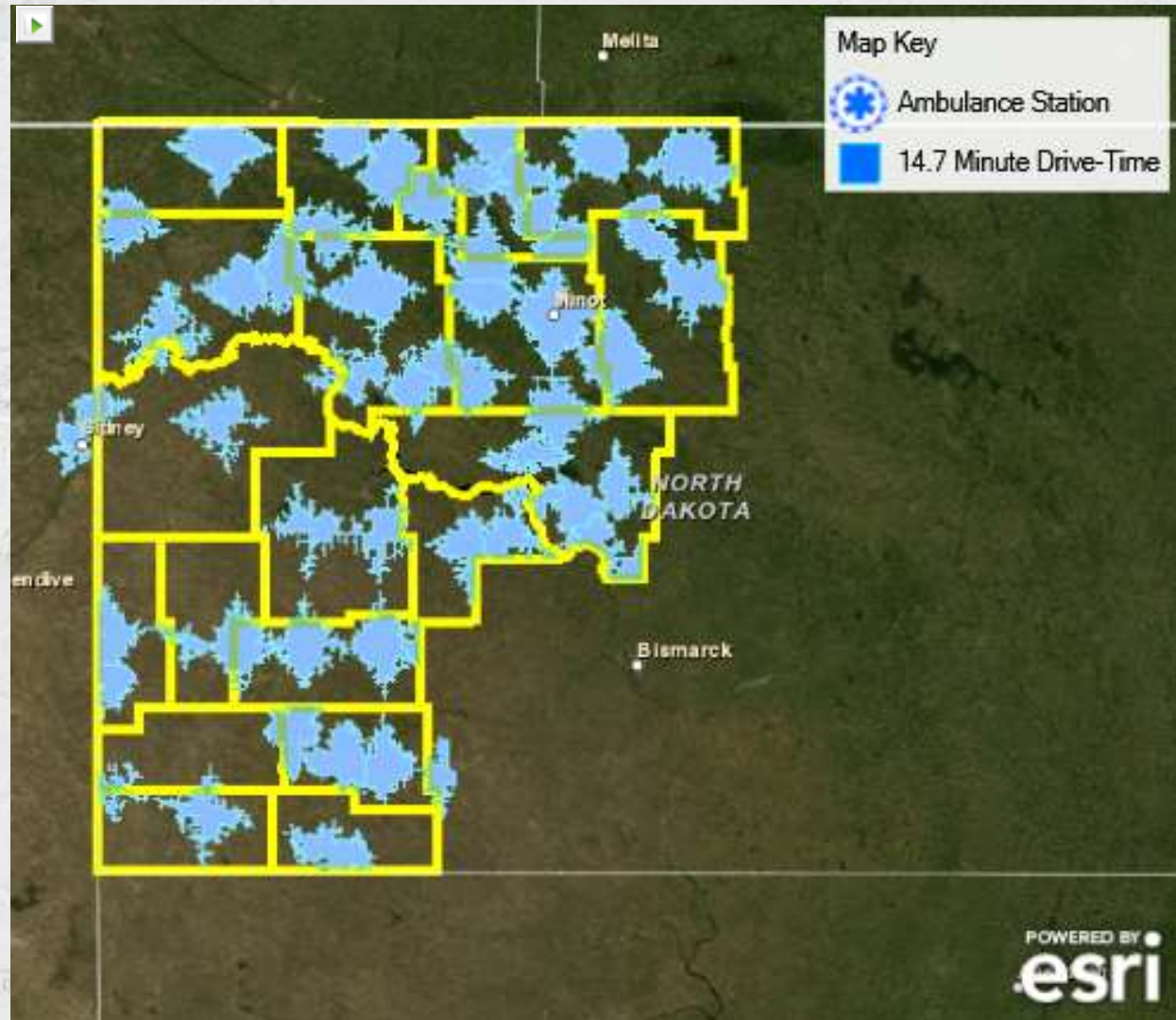
Suitability Analysis



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Factors of Influence

1. Study Area
2. Population
3. Proximity to Cities
4. DOT Crash Location
5. Ambulance Runs



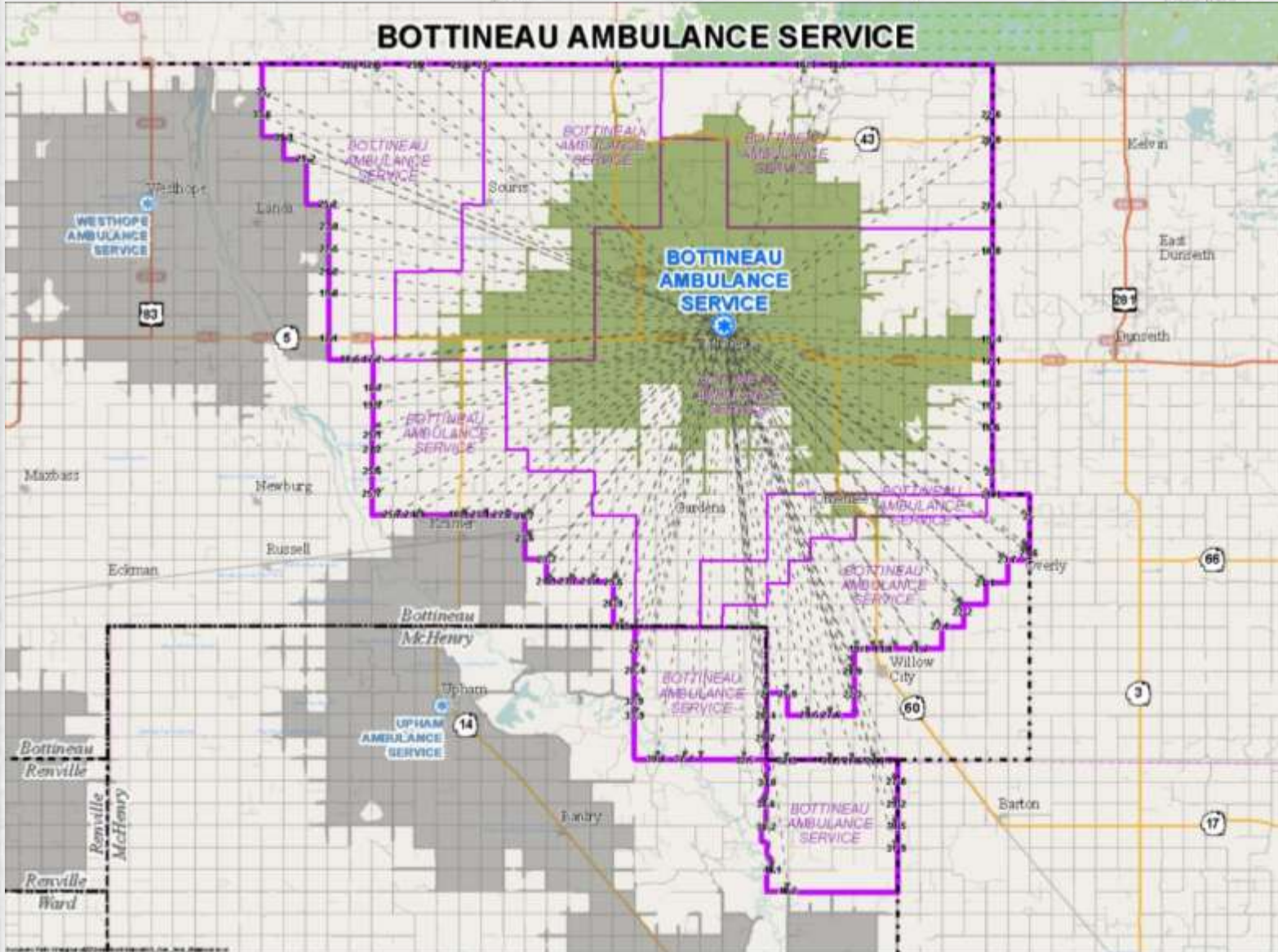
BOTTINEAU AMBULANCE SERVICE

NDAOGPC
Emergency Services Study

- County Bnd
- Ambulance Station
- Ambulance Coverage Area
 - 14.7 Minute Drive-Time
 - ESN
 - Distance (mins)

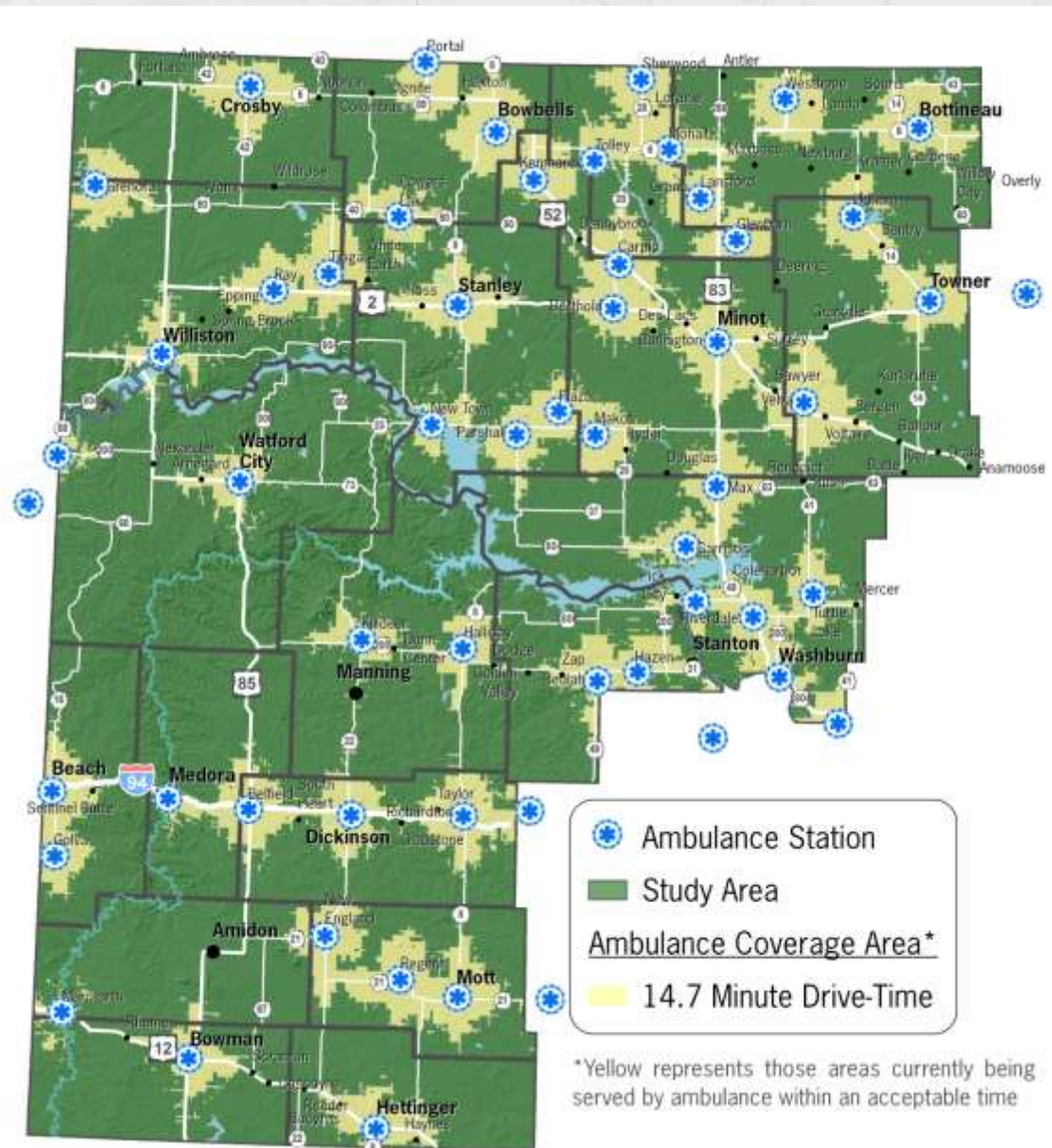


BOTTINEAU AMBULANCE SERVICE



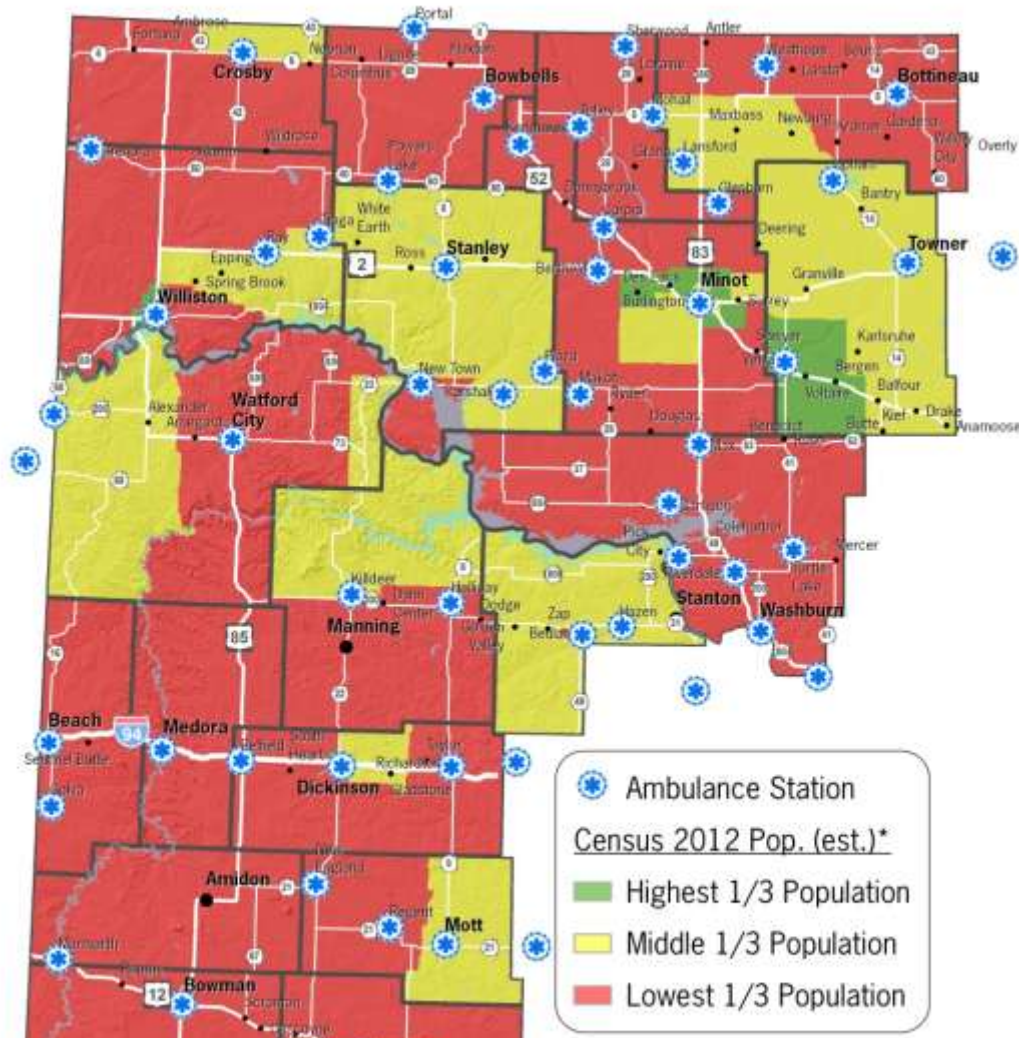
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Analysis – Study Area



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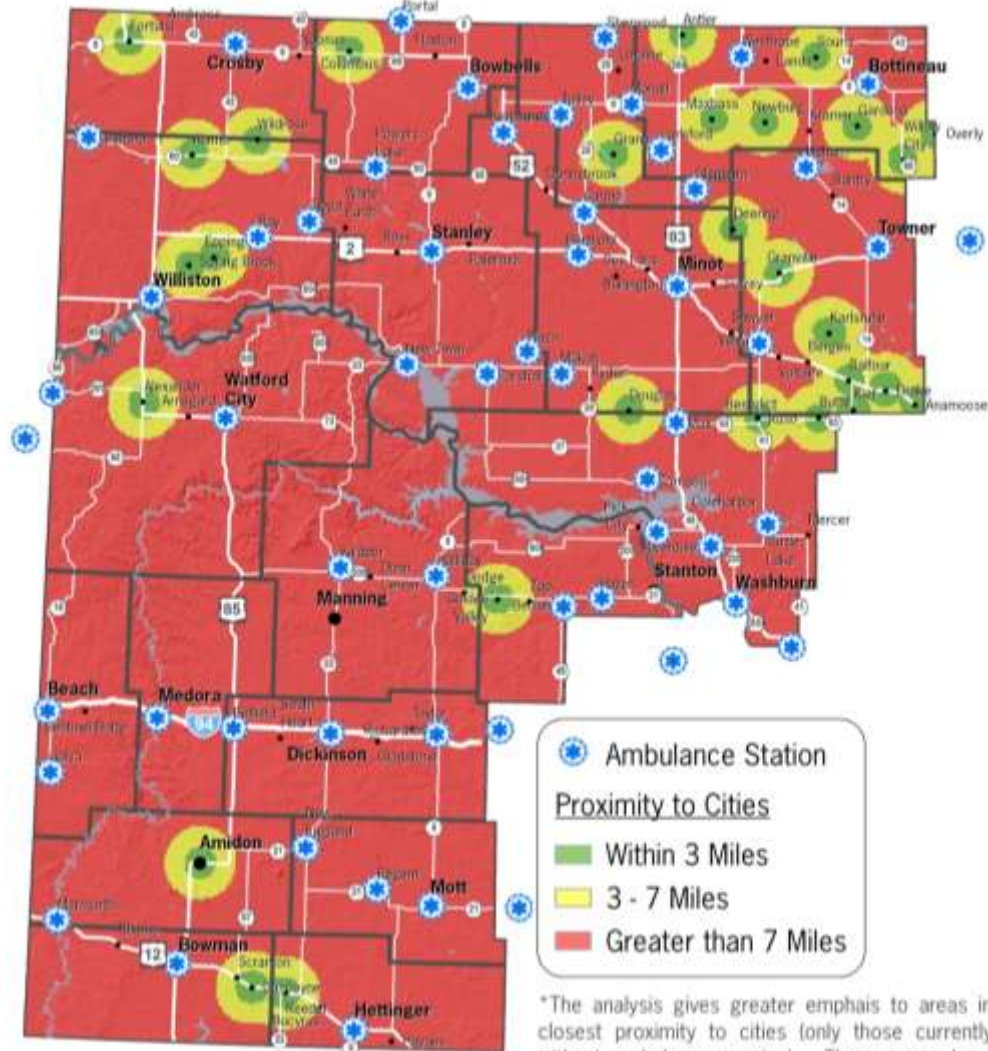
Analysis - Population



*Higher population equates to higher potential need for ambulance services. Analysis gives greater emphasis to areas with highest population.

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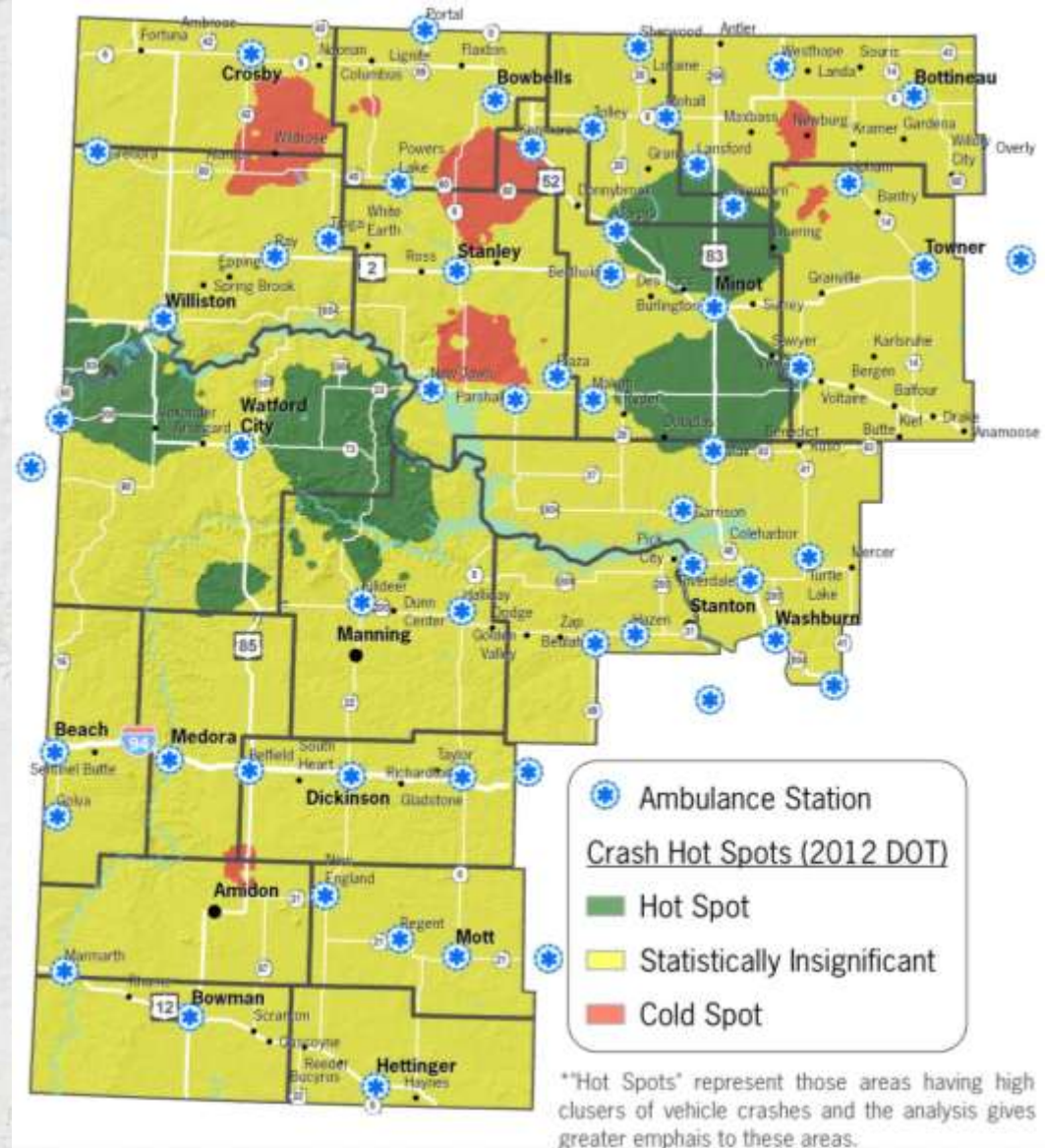
Analysis – Proximity to Cities



*The analysis gives greater emphasis to areas in closest proximity to cities (only those currently without ambulance service). These areas have greater density of population, but also have the needed infrastructure to support a new ambulance station.

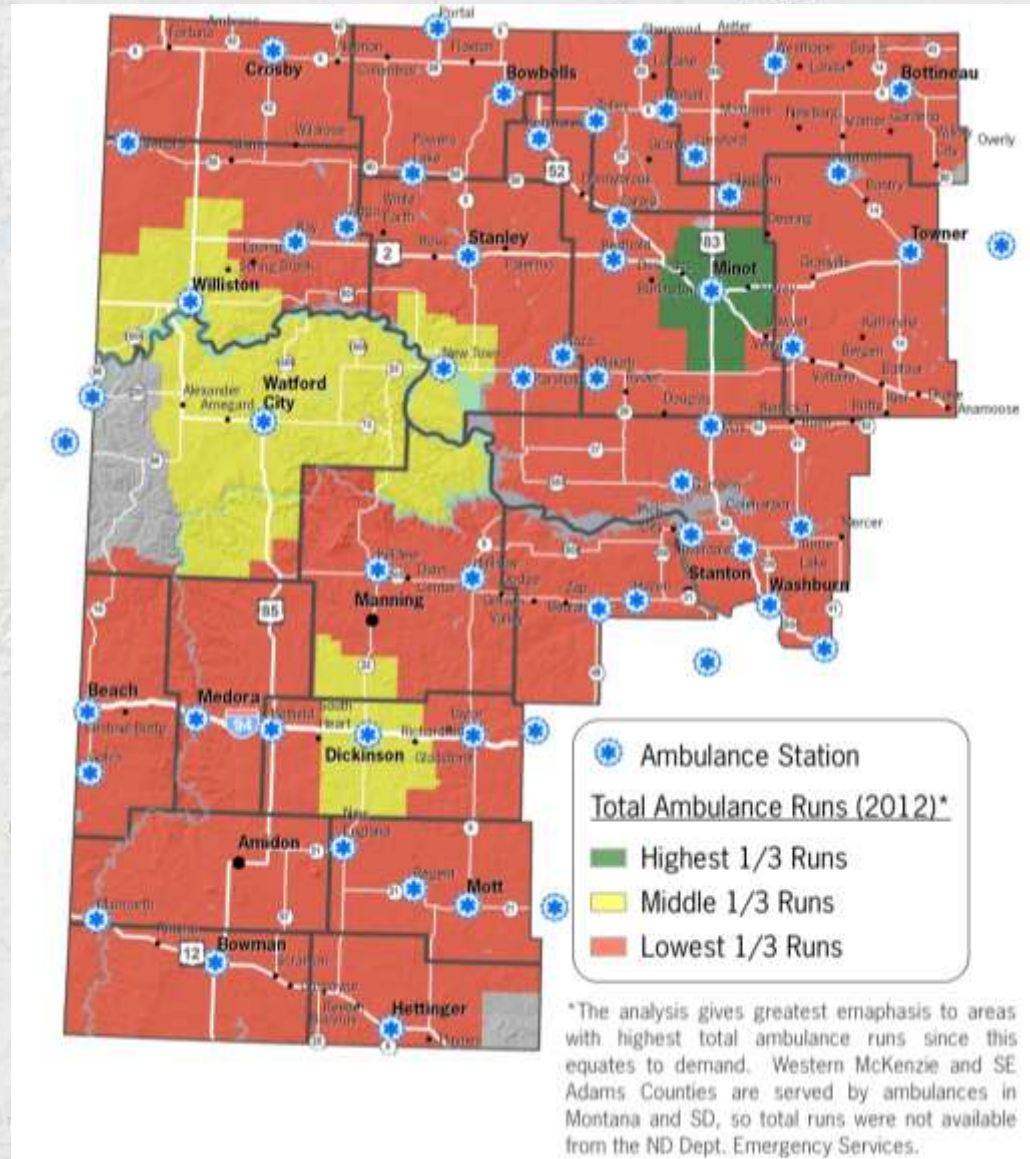
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Analysis – NDDOT Crash Locations



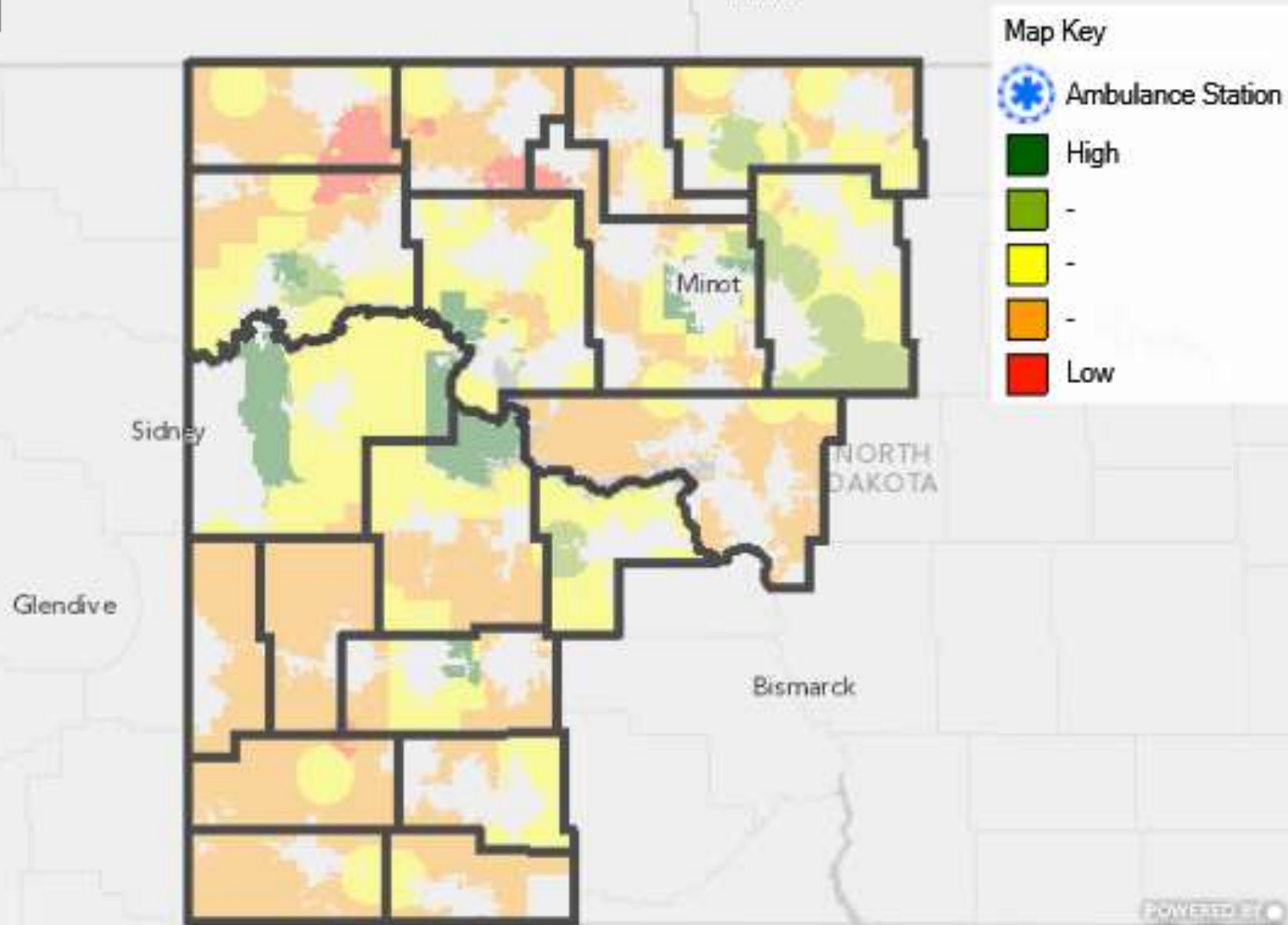
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Analysis – Ambulance Runs



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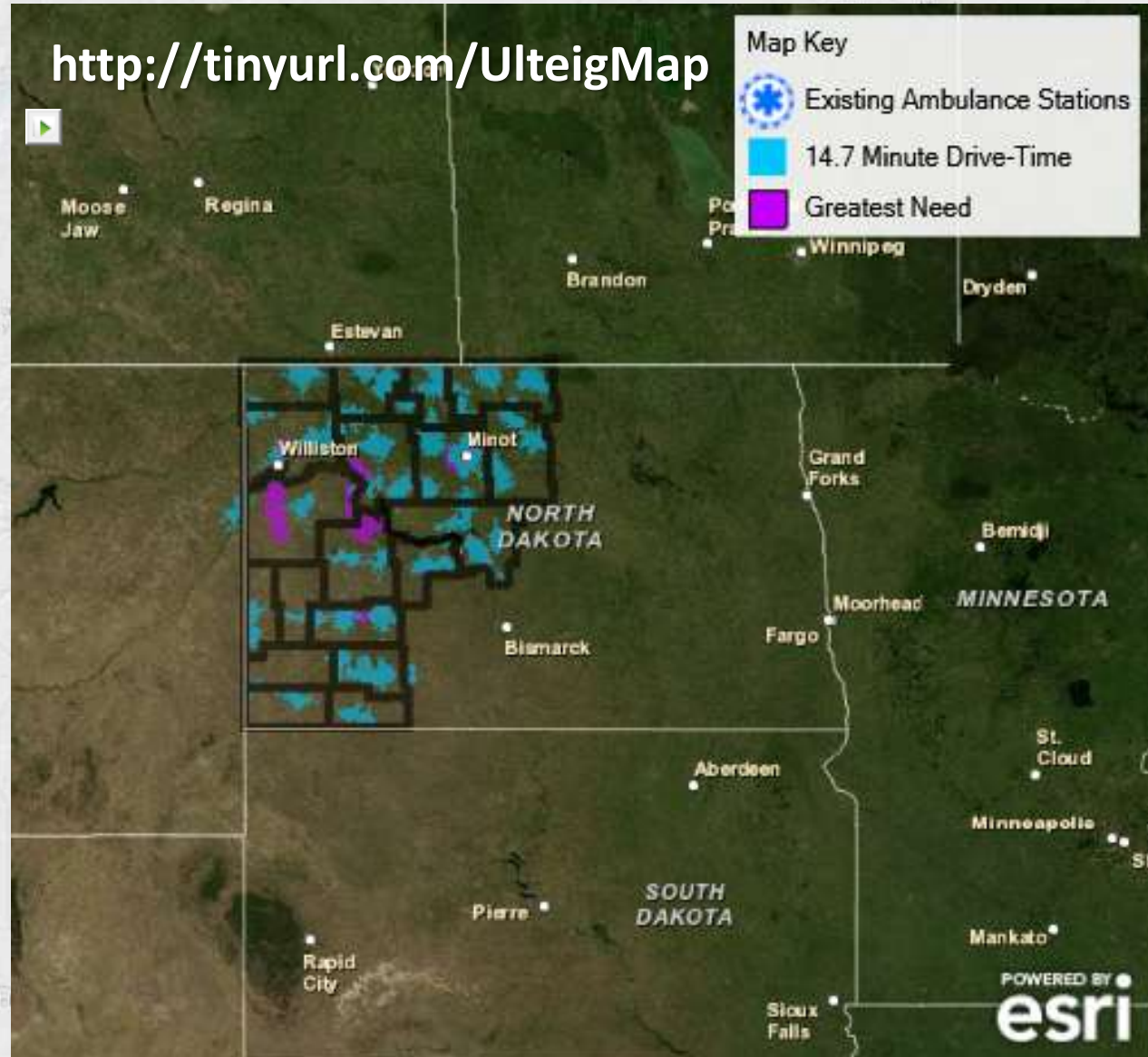
Results – Suitability Ranking



Greatest Need - Ambulance Station

Results – Greatest Need

<http://tinyurl.com/UlteigMap>



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Next Steps...

Future Analysis

1. Calculate 14.7 Drive Times for Cities in Greatest Need Areas
2. “Ground Truthing”
3. Location-Allocation Analysis (Can Resources be shifted around?)

Who Has the First Question

<http://tinyurl.com/UlteigMap>

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